

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

United States Patent and Trademark
Office
(Box PCT)
Crystal Plaza 2
Washington, DC 20231
ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 09 July 1999 (09.07.99)	Applicant's or agent's file reference LJIEM1100WO
International application No. PCT/US98/25791	Priority date (day/month/year) 05 December 1997 (05.12.97)
International filing date (day/month/year) 04 December 1998 (04.12.98)	
Applicant BOURDON, Mario, A. et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

04 June 1999 (04.06.99)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer D. Barmes Telephone No.: (41-22) 338.83.38
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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

RECD 23 MAR 2000
WIPO PCT

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Applicant's or agent's file reference LJIEM1100WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US98/25791	International filing date (day/month/year) 04 DECEMBER 1998	Priority date (day/month/year) 05 DECEMBER 1997
International Patent Classification (IPC) or national classification and IPC Please See Supplemental Sheet.		
Applicant LA JOLLA INSTITUTE FOR EXPERIMENTAL MEDICINE		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets.
- ☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 04 JUNE 1999	Date of completion of this report 27 FEBRUARY 2000
Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	Authorized officer SUSAN UNGAR JOYCE BRIDGERS PARALEGAL SPECIALIST CHEMICAL MATRIX
Facsimile No. (703) 305-3230	Telephone No. (703) 308-0196

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US98/25791

I. Basis of the report

1. This report has been drawn on the basis of *(Substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments):*

☒ the international application as originally filed.

☒ the description, pages 1-18 , as originally filed.

pages NONE , filed with the demand.

pages NONE , filed with the letter of _____.

pages _____ , filed with the letter of _____.

☒ the claims, Nos. 1-29 , as originally filed.

Nos. NONE , as amended under Article 19.

Nos. NONE , filed with the demand.

Nos. NONE , filed with the letter of _____.

Nos. _____ , filed with the letter of _____.

☒ the drawings, sheets/fig 1-3 , as originally filed.

sheets/fig NONE , filed with the demand.

sheets/fig NONE , filed with the letter of _____.

sheets/fig _____ , filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

☒ the description, pages none .

☒ the claims, Nos. none .

☒ the drawings, sheets/fig none .

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the ~~Supplemental Box~~ Additional observations below (Rule 70.2(c)).

4. Additional observations, if necessary:

NONE

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US98/25791

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. STATEMENT**

Novelty (N)	Claims <u>13-20, 23-25, 27-29</u>	YES
	Claims <u>1-12, 21-22, 26</u>	NO
Inventive Step (IS)	Claims <u>13-20, 23-25, 27-29</u>	YES
	Claims <u>1-12, 21-22, 26</u>	NO
Industrial Applicability (IA)	Claims <u>1-29</u>	YES
	Claims <u>NONE</u>	NO

2. CITATIONS AND EXPLANATIONS

Claims 1-2 lack novelty under PCT Article 33(2) as being anticipated by Borgstrom (1993). Borgstrom (93) discloses a method for the inhibition of angiogenesis comprising inhibiting a host cell angiogenic effect that is the same as that claimed. The administration of an agent that inhibits angiogenesis (Linomide) to a cellular system is interpreted to meet the claim limitation "inhibiting a host cell angiogenic effect."

Claims 1-5 and 26 lack novelty under PCT Article 33(2) as being anticipated by either of Ferrara or Borgstrom. Both references disclose a method for the inhibition of angiogenesis comprising inhibiting a host cell angiogenic effect that is the same as that claimed. The administration of an agent that inhibits angiogenesis (anti-VEGF) is interpreted to meet the claim limitation "inhibiting a host cell angiogenic effect."

Claims 1-4 lack novelty under PCT Article 33(2) as being anticipated by either of DiPetro or Hu. Both references disclose a method for the inhibition of angiogenesis comprising inhibiting a host cell angiogenic effect that is the same as that claimed. The administration of an agent that inhibits angiogenesis (TSP1, as in DiPetro, or IL-1 receptor antagonist, antiserum to IL-8, anti-TNF alpha, or monoclonal bFGF, as in Hu) is interpreted to meet the claim limitation "inhibiting a host cell angiogenic effect."

Claims 1-12, 21-22 and 26 lack novelty under PCT Article 33(2) as being anticipated by Lokeshwar. Lokeshwar discloses a method that is inherently the same as that claimed, a method for the inhibition of angiogenesis comprising inhibiting a host cell angiogenic effect that is the same as that claimed. The administration of the 5A1 monoclonal antibody to M-CSF-1, which inherently "inhibits a host cell angiogenic effect."

Claims 1-29 have industrial applicability as defined by PCT Article 33(4).

Claims 13-20, 23-25 and 27-29 meet the criteria set out in PCT (Continued on Supplemental Sheet.)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

Sheet 10

CLASSIFICATION:

The International Patent Classification (IPC) and/or the National classification are as listed below:

IPC(7): A61K 39/395, 48/00; C07K 16/18, 16/22, 16/24, 16/26, 16/28 and US Cl.: 424/130.1; 514/44; 530/387.1, 388.23, 388.85

V. 2. REASONED STATEMENTS - CITATIONS AND EXPLANATIONS (Continued):

Article 33(2)-(3), because the prior art does not teach or fairly suggest the claimed method of inhibiting angiogenesis.

NEW CITATIONS

LOKESHWAR, B.L. et al. Development and Characterization of Monoclonal Antibodies to Murine Macrophage Colony-Stimulating Factor. The Journal of Immunology. 15 July 1988, Vol. 141, No. 2, pages 483-488, see entire document.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US98/25791

A. CLASSIFICATION OF SUBJECT MATTER		
IPC(6) : A61K 39/395, 48/00; C07K 16/18, 16/22, 16/24, 16/26, 16/28 US CL : 424/130.1; 514/44; 530/387.1, 388.23, 388.85 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) U.S. : 424/130.1; 514/44; 530/387.1, 388.23, 388.85		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) APS, STN, REGISTRY, CAPLUS, MEDLINE, EMBASE, LIFESCI, BIOTECHDS, WIPIDS inhibition of angiogenesis, macrophages, M-CSF, M-CSF-1		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Database PREV, 1993: 44131748, BORGSTROM, P. et al. Inhibition of Angiogenesis by the Quinoline-2-carboxamide Linomide. FASEB Journal. 28 March-April 1993, Vol. 7, No. 3-4, page A879, see entire document.	1-3, 13-14, 26
X	FERRARA, Napoleone. The Role of Vascular Endothelial Growth Factor in Pathological Angiogenesis. Breast Cancer Research and Treatment. 1995, Vol. 36, pages 127-137, see entire document.	1-5, 13, 26
X	DiPIETRO, L. et al. Angiogenic Macrophages Produce the Angiogenic Inhibitor Thrombospondin 1. American Journal of Pathology. September 1993, Vol. 143, No. 3, pages 678-684, see entire document.	!-4, 26
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents:	*T*	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
A document defining the general state of the art which is not considered to be of particular relevance	*X*	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
E earlier document published on or after the international filing date	*Y*	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*G*	document member of the same patent family
O document referring to an oral disclosure, use, exhibition or other means		
P document published prior to the international filing date but later than the priority date claimed		
Date of the actual completion of the international search 23 MARCH 1999	Date of mailing of the international search report 15 APR 1999	
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer <i>Nancy A. Johnson</i> NANCY A. JOHNSON Telephone No. (703) 308-0196 <i>for</i>	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US98/25791

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BORGSTROM, P. et al. Complete Inhibition of Angiogenesis and Growth of Microtumors by Anti-Vascular Endothelial Growth Factor Neutralizing Antibody: Novel Concepts of Angiostatic Therapy from Intravital Videomicroscopy. Cancer Research. 01 September 1996, Vol. 56, pages 4032-4039, see entire document.	1-5, 26
X	HU, D.E., et al. Inhibition of Angiogenesis in Rats by IL-1 Receptor Antagonist and Selected Cytokine Antibodies. Inflammation. 1994, Vol. 18, No.1, pages 45-58, see entire document.	1-4